Investigating “mobility hubs“, and assessing their impacts
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ABSTRACT

Mobility hubs, bring together, connect and provide users with several modes of transport. Cities adopt them to help reaching several objectives, like the reduction of air pollution, congestion and car ownership. As part of the Interreg Mobi-Mix project, we have taken a close look at mobility hubs. Based on bibliographic research, talks with experts and cities, we established a state of the art that will help to better understand the concept. Cities, will benefit from a number of guidelines for a better mobility hubs. A method of estimating the impact on CO2 emissions at each project step has been developed and tested in two partner cities, Norfolk and Valenciennes. It is mainly based on surveys and results from other cities as well as multiplicative factors. The first results point a reduction in CO2 emissions that is greater than the targeted objectives.

MOBILITY HUBS DEFINITION

A dozen definitions of the mobility hub concept.

Most authors agree that a “mobility hub” is a single location, specifically designed to be highly recognizable and visible, with some comparing it to an urban “infrastructure”.

Some differences are based on location, on the types of users targeted.

The major divergences is whether integrating public transport is a mandatory or not.

Some definitions that are equivalent to mobility-related facilities that have existed for a long time.

Figure 1: What is a “mobility hub”? (W,HACHED, 2022)

We consider the barest minimum definition of a mobility hub is: “an urban infrastructure designed to provide a variety of shared modes (at least 2) in the same place, where integration with public transport is highly recommended”. The idea is to create a centrality point for the transport network. It can accommodate other modes or provide other services, features as quality factors.

MOBILITY HUBS TYPES

• Regional Mobility Hubs or Community Mobility Hubs
• Anchor / Gateway hubs
• Typologies based on urban context and transport functions: Urban Context (City Centre, Urban Transit Nodes, Historic Town Centres…). Transportation Function (Entry, Transfer, Destination)
• Neighbourhood, central, and regional hubs.

MOBILITY HUBS OBJECTIVES

- Flexibility
- Increasing resilience
- Sustainable transportation options
- Forge partnerships
- Technological innovations
- Mobility hubs Objectives
- Safety and security
- Improvement of user experience
- Inclusivity
- Equity
- Lowering parking places
- More efficient use of public space
- Reduction of car ownership and car use

MOBILITY HUBS CO2 IMPACT ASSESSMENT

PROJECT PHASES: Conceptualisation, Pre-design, Design, Deployment, Assessment

Exploratory evaluation
Case studies Impact repository
User profiling Potential demand Intended impact
User profiling Demand Causal impact

Figure 4: Shared mobility solutions and Mobility hubs CO2 impact assessment method: MODE (BAX & Company, 2021)

FIRST RESULTS

Norfolk -23 CO2 tons per year
Valenciennes -67 tons of CO2 per year.